

Remarks:

Reconsideration of the application is requested. An RCE is being filed simultaneously herewith.

Claims 1-17 remain in the application. Claims 1-7, 9-10 and 13-17 have been amended. Claim 8 has been withdrawn from consideration.

In item 4 on page 2 of the above-mentioned Office action, claims 1-7, and 9-17 have been rejected as being anticipated by Behmel et al. (German Application Publication DE 43 27 466 A1) under 35 U.S.C. § 102(b).

The rejection has been noted and claims 1 and 16-17 have been amended in an effort to even more clearly define the invention of the instant application. Support for the changes is found on page 11, line 17 and page 18, line 25 to page 19, line 3 of the specification.

Before discussing the prior art in detail, it is believed that a brief review of the invention as claimed, would be helpful.

Claims 1 and 16-17 call for, inter alia:

a pair of perforating cylinders defining a perforation nip therebetween for passage of the material webs through said perforating nip, one of said perforating cylinders being adjustable in relation to said perforating nip relative to the other of said perforating cylinders;

an adjusting unit for adjusting said at least one perforating bar relative to a periphery of said respective one of said perforating cylinders. (Emphasis added.)

According to the invention of the instant application, at least one of the perforating cylinders (4) is adjustable in relation to the perforating nip (26) in order to adjust the penetration depth of the perforations to be produced in the material webs (see page 16, lines 3-10 and page 19, lines 12-14 of the specification). In contrast, it can be clearly seen from the figures and the disclosure of Behmel et al. that the nip width in Behmel et al. is not adjustable. The advantage of the structure of the invention of the instant application is that the setting and adjustment of the perforation depth, meaning the extent of penetration of the perforation, in particular in multi-layer material webs, is simplified (see page 9, lines 3-5 of the specification).

Further, according to the invention of the instant application, the peripheral positions of the perforating bars (27, 27.1; 28, 28.1) are adjustable relative to the periphery of a respective perforating cylinder (3, 4) by an adjusting unit (48) (see page 18, line 25 to page 19, line 3 of the specification). This feature is also not disclosed in Behmel et al.

Accordingly, the invention of the instant application provides two adjustable degrees of freedom: the peripheral position of the perforation elements (the perforating tools and strips) disposed on the perforating bars and the position of at least one perforating cylinder (4). The advantage of the perforating device according to the invention of the instant application is, therefore, that it can be very easily adapted to different folding modes.

Clearly, Behmel et al. do not show "one of said perforating cylinders being adjustable in relation to said perforating nip relative to the other of said perforating cylinders" and "an adjusting unit for adjusting said at least one perforating bar relative to a periphery of said respective one of said perforating cylinders," as recited in claims 1 and 16-17 of the instant application.

Claims 1 and 16-17 are, therefore, believed to be patentable over the art and since all of the dependent claims are ultimately dependent on claim 1, they are believed to be patentable as well.

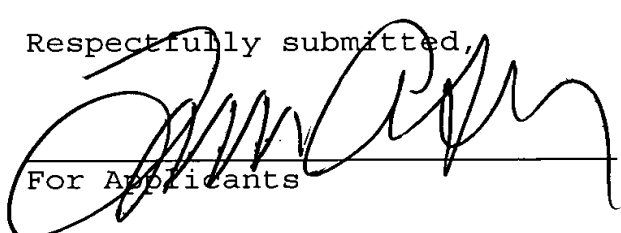
In view of the foregoing, reconsideration and allowance of claims 1-7 and 9-17 are solicited.

In the event the Examiner should still find any of the claims to be unpatentable, counsel would appreciate a telephone call so that, if possible, patentable language can be worked out.

If an extension of time for this paper is required, petition for extension is herewith made. Please charge any fees which might be due with respect to Sections 1.16 and 1.17 to the Deposit Account of Lerner and Greenberg, P.A., No. 12-1099.

Respectfully submitted,

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Marked-Up Version of the Amended Claims:

Claim 1 (twice amended). A device for perforating material webs, comprising:

a pair of perforating cylinders defining a perforation nip therebetween for passage of the material webs through said perforating nip, one of said perforating cylinders being adjustable in relation to said perforating nip relative to the other of said perforating cylinders;

perforating tools accommodated on said perforating cylinders and capable of producing perforations on copies in an exactly correct position with respect to cross-folds formed in the copies, the perforation position being adjustable during machine operation;

perforating strips disposed on said perforating cylinders, said perforating tools being cooperatively related with respective one of said perforating strips for producing transverse or cross-perforations and being adjustable in the correct position relative to the cross-folds; [and]

at least one perforating bar disposed coaxially with [at least] a respective one of said perforating cylinders, said

perforating tools and said perforating strips being accommodated on said at least one perforating bar[,]; and

an adjusting unit for adjusting said at least one perforating bar [being adjustable] relative to a periphery of said respective one of said perforating cylinders [at least one of said perforating cylinders being adjustable in relation to said perforating nip relative to at least another of said perforating cylinders].

Claim 2(amended). The perforating device according to claim 1, wherein said at least one perforating bar is mounted on a cylinder shaft extending through [the] said respective one of said perforating [cylinder] cylinders.

Claim 3(amended). The perforating device according to claim 1, wherein one of said at least one perforating bar is adjustable in a direction opposite to [the] a direction of rotation of [the one] said respective one of said perforating [cylinder] cylinders.

Claim 4(amended). The perforating device according to claim 1, wherein [a] one of said perforating [tool] tools and [a] one of said perforating [strip] strips are accommodated stationarily on [the] said periphery of [the] said respective one of said perforating [cylinder] cylinders.

Claim 5(amended). The perforating device according to claim 1, wherein [a] one of said perforating [tool] tools is accommodated on one of said at least one perforating bar on [the] one perforating cylinder, and is cooperatively related with [a] one of said perforating [strip] strips accommodated on the other perforating cylinder [which is] located opposite [the] said one perforating cylinder.

Claim 6(amended). The perforating device according to claim 1, wherein [a] one of said perforating [tool] tools used for a delta-folding mode is accommodated on one of said at least one perforating bar on [the] one perforating cylinder, and is cooperatively related with [a] one of said perforating [strip] strips accommodated on the other perforating cylinder [which is] located opposite [the] said one perforating cylinder.

Claim 7(amended). The perforating device according to claim [1] 5, wherein [a] one of said perforating [tool] tools is accommodated on [another] one of said at least one perforating bar on [one of the] said other perforating [cylinders] cylinder, and is cooperatively related with [a] one of said perforating [strip] strips accommodated stationarily on [the] said periphery on [another of the] said one perforating [cylinders] cylinder located opposite [the one] said other perforating cylinder.

Claim 9(amended). The perforating device according to claim 1, [including at least another perforating bar, said perforating bars being accommodated in] wherein said perforating cylinders have respective cylinder shafts, the perforating device includes mounting supports on said cylinder shafts [of the perforating cylinders], said perforating bars are accommodated in said mounting supports.

Claim 10(amended). The perforating device according to claim 1, wherein [the] said perforating cylinders have respective cylinder shafts[,] and [including] transmission elements on [the] said cylinder shafts, said transmission elements [being actable] to be acted upon by [a common] said adjusting unit.

Claim 13(amended). The perforating device according to claim 12, wherein [said transmission elements have at least another force transmission point,] said at least one force transmission [points being] point is constructed as [toothings] a toothing.

Claim 14(amended). The perforating device according to claim 10, including, between [the] said transmission elements of [the] said perforating cylinders, a compensating device for permitting eccentric adjustment of one of [a pair of the] said perforating cylinders relative to [a] said perforating nip [located therebetween].

Claim 15(amended). The perforating device according to claim 1, [including] wherein said pair of perforating cylinders includes a stationarily mounted perforating cylinder and an adjustable perforating cylinder, the perforating device includes a drive and a transmission element for [the] said adjustable perforating cylinder, and an articulated connection between said drive [for the adjustable perforating cylinder] and said transmission element [therefore].

Claim 16(amended). A folder having a device for perforating material webs, the device comprising:

a pair of perforating cylinders defining a perforation nip therebetween for passage of the material webs through said perforating nip, one of said perforating cylinders being adjustable in relation to said perforating nip relative to the other of said perforating cylinders;

perforating tools accommodated on said perforating cylinders and capable of producing perforations on copies in an exactly correct position with respect to cross-folds formed in the copies, the perforation position being adjustable during machine operation;

perforating strips disposed on said perforating cylinders, said perforating tools being cooperatively related with respective one of said perforating strips for producing transverse or cross-perforations and being adjustable in the correct position relative to the cross-folds; [and]

at least one perforating bar disposed coaxially with [at least] a respective one of said perforating cylinders, said perforating tools and said perforating strips being accommodated on said at least one perforating bar[,]; and

an adjusting unit for adjusting said at least one perforating bar [being adjustable] relative to a periphery of said respective one of said perforating cylinders [at least one of said perforating cylinders being adjustable in relation to said perforating nip relative to at least another of said perforating cylinders].

Claim 17(amended). A pin-less folder having a device for perforating material webs, the device comprising:

a pair of perforating cylinders defining a perforation nip therebetween for passage of the material webs through said perforating nip, one of said perforating cylinders being adjustable in relation to said perforating nip relative to the other of said perforating cylinders;

perforating tools accommodated on said perforating cylinders and capable of producing perforations on copies in an exactly correct position with respect to cross-folds formed in the copies, the perforation position being adjustable during machine operation;

perforating strips disposed on said perforating cylinders, said perforating tools being cooperatively related with respective one of said perforating strips for producing transverse or cross-perforations and being adjustable in the correct position relative to the cross-folds; [and]

at least one perforating bar disposed coaxially with [at least] a respective one of said perforating cylinders, said perforating tools and said perforating strips being accommodated on said at least one perforating bar[,]; and

an adjusting unit for adjusting said at least one perforating bar [being adjustable] relative to a periphery of said respective one of said perforating cylinders [at least one of said perforating cylinders being adjustable in relation to said perforating nip relative to at least another of said perforating cylinders].